Successful Educational Experiences

A Bi-Monthly Look at Success Stories Involving Technology in the Classroom

Lessons from My Year in a Computer Lab

Or "I Couldn't Possibly Fail With 360 Helpers!"

by Sue White, Ocean View School District

Three hundred and sixty diverse students and I became unlikely partners on an exciting and enjoyable journey through the world of computer technology. It began almost a year ago, when I walked triumphantly into our school's computer lab, happy to have finally received this assignment as a half time teacher. I was unsure of what to expect, but after looking at the condition of the equipment, it was obvious that some cleaner, soft rags, and elbow grease was badly needed.

The lab was five years old, and had seen little activity. No one knew exactly what equipment was there, whether it worked, or what it could do. But I didn't mind the work ahead, for this was my chance to introduce students and teachers to the exciting world of Apple® computers. This was my chance to integrate computer technology into several curriculum areas.

After all the keyboards and monitors were scrubbed clean, I inventoried all the existing software, then decided to decorate the lab in bright, inviting colors. I stood back and admired the results of my efforts, proud of the lab and ready for the onslaught of students.

My schedule included 16 students per group for 1st-6th grades, a kindergarten exploratory class, and special ed students - a total of 360 new faces.

Young helpers at work in the computer lab. Photo by Sue White

It was quickly apparent that the students badly needed training on the Apple II computers and the various software programs they were to use. The first few days I literally ran from computer to computer, restarting programs which had crashed because of keyboard errors the children inadvertantly made. Of course I had little time to assist the computer literate students who hadn't goofed.

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from the editor:

Technology in Education: It Works!

The issue of technology in education is of growing interest to a widening band of today's educators. In principle,this group firmly believes that education needs to grow beyond just a paper/pencil/textbook based curriculum. They believe education needs to be more aggressive in embracing technology. In practice, this group goes in two different directions.

There are those who expound upon the virtues of today's technological revolution, and profess the need for the implementation of those technologies into education. Yet, when forced to a point of appliction, they seem to have a myriad of reasons as to why they can't make it happen. Reasons such as lack of equipment, lack of finances, trained personnel, and lack of time abound in their rhetoric. Their enthusiasm for the principle that "technology works" ends here.

Then there are those that not only expounded on the virtues of technology, but have been able to apply various technologies to the educational process. They have not been deterred or stopped by lack of equipment, finances, personnel, or time. They have found the ways and means to provide successful educational experiences to students through the application of technology to the learning process. They have improved student performance through technology. Unfortunately, this group is few, and geographically diverse.

This newsletter will strive to: (1) Provide an effective networking system for those existing scattered "hot spots," so others may share in their successes; and (2) Provide models of successful applications for those who promote, but have not yet found the ways and means to apply those tools, so they may make that first step toward improving student performance through technology.

We hope you find the articles to be interesting, and have value for you both at the information and application level. We would appreciate your comments and suggestions as the year goes on. Additionally, we sincerely welcome any articles you would like to submit. **FJR**

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Orange County CUE Arranges Educator Purchase with Apple®

Computer-using Educators Set Up Group Purchase Arrangement. Hundreds of Computers Expected to be Purchased at Discount

Beginning on November 10th, Orange County educators belonging to the Computer-using Educators organization will be eligable to purchase Apple and Apple Macintosh® computers, printers, and peripherals at special prices. The purchase plan will extend through December 6, 1989. This arrangement, called the Educator Advantage program, has been sponsored by CUE in other areas of the state, but this is the first time it has been held in Orange County.

Not to be confused with the normal educator purchase program available through Apple Computer, Inc., this plan leverages the benefits of mass purchasing for the advantage of the educator. This means that prices will be even lower than the substantial discounts available through the Apple educator purchase program.

Another major benefit of the program is the twelve hours of training being given to every purchaser. Training will be conducted by the Orange County Department of Education under contract to CUE.

Potential purchasers must be a member of CUE, but the membership fee is only $22.00 per year. Non-members may join by simply filling out an application and submitting a check.

Payments for purchases are made to Apple by check or by using the Apple Credit Card, available through any Authorized Apple Dealer. Educators can also take advantage of financing options available at their local Credit Union.

Orders may be placed by contacting a member of CUE, or your local Apple Educational Dealer. For a list of those dealers, you may call Hoffman Computer Systems at (714) 750-7318.

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Educator Advantage Group Prices

Description	Reg. Educ. Price	Educ. Advantage
Apple IIGS System (incl Color monitor & printer)	$2,046	**$1,826**
Mac SE 20 System (incl 20 Meg HD & printer)	$2,566	**$2,246**
Mac SE 030 System (incl 40 Meg HD & printer)	$3,672	**$3,302**
Mac IIcx System (incl 40 Meg HD & Color monitor)	$4,628	**$4,178**

Software Fair for Educators

To be Held Sat, November 18th

A special Software Fair has been organized by the Orange County Computer-using Educators (CUE) which should be of considerable interest to all Orange County educators interested in getting the most from their personal computers.

Several major publishers will be represented, including Scholastic, Roger Wagner Publishing, and MECC. Educators may also join CUE and place orders under the Apple Educator Advantage Program.

The Fair will be held from 8:00 am to 3:00 pm on Saturday, November 18th, at Savanna High School, 301 North Gilbert Street, Anaheim, CA 92801. Savanna H.S. is located a block E. of Magnolia, and N. of Lincoln

beginner's bytes

One Teacher, One Computer, and Thirty Kids

by Fernando

Teachers often hesitate to take advantage of the opportunity to have a computer in their classroom. Their initial reaction is usually, "How can I have thirty kids use one computer?" Here are some practical ideas that may work for you.

Introduce the class to new software programs by connecting the computer to your classroom TV. Simply get a long version of the cable that connects the computer to its monitor and plug it into the "video in" port on the TV. For those who might like to know, the video cable used by most classroom computers is called an RCA cable.

Once the program has been introduced, have the students work singly or in twos on the computer in 20 minute slots. This method permits each student one hour per week on the computer.

Once the program has been introduced, have the students work singly or in twos on the computer in 20 minute slots. This method permits each student one hour per week on the computer.

Using the computer connected to the TV (as described above), divide your class into groups of four. Select any one of the hundreds of available critical thinking, social science, or science simulation programs. Then have each group work to find an agreed upon solution to the situation presented.

Think about using your computer connected to the TV to graphically explain a new math process or a writing format to the entire class.

Train two students how to use a new program. Then have those students train two others, and so on. Not only will your class gain knowledge of the specific software, but they will also share the invaluable experience of teaching. You might have your entire class familiarized and you only had to train the first two students yourself.

These are just a few applications of sharing one computer with thirty students. Please feel free to submit other ideas or practical suggestions that other readers might use.

Readers are encouraged to send letters to Fernando. Please contact the publisher.

Once upon a time, so the story goes, a computer company sometimes known as "big blue" conducted a study to determine just how easy it was for a new user to setup their computers. They rented an downtown office with a sidewalk entrance, and set up a room with a table, a chair, and a computer system in a box.

Passers-by would be recruited to come in and set up the computer strictly according to the instructions in the user's manual. Executives from the company observed from a one way mirror.

As you may image, many hilarious stories resulted, but one of the best involved the fellow who, when asked if he was finished, said he was, but he couldn't get any more disks into the drive. The perplexed executives discovered that their instruction manual never advised the user to take a disk out of the drive, only to insert setup disks into it, so the test subject had literally stuffed the drive full of floppies!

Creating a School Newspaper

Using a Macintosh® Computer

by Dave Murphy Graphics Video Technician Ocean View School District

Last school year I was approached by one of our school principals regarding a banner, or front page design for his school newspaper. After a brief discussion of his available options for a computer / word processor for the students, we discovered that he had a Macintosh computer, MacWrite word processing software, and access to a laser printer. In effect, he had everything necessary to compose, edit, and finalize articles for a school paper.

The solution I offered for creating a banner involved creating it in MacDraw II, a popular graphics program, and saving it as "stationery". This is an extremely useful option that permits other enhancements.

Next we went back to the MacDraw II page layout file and began pasting articles from the scrapbook on to the page. Once the text block was selected, we could choose the correct typeface, or font. The text block was stretched to fit exactly into the column layout desired. By pasting, stretching, and cutting the text to fit, the layout was soon accomplished.

Special attention was given to headlines by highlighting them and selecting a large font, then bolding or italicizing it as appropriate. When you begin selecting fonts and type sizes, be aware that too many styles can be extremely distracting. It is best to select a font and stick with it, using a 10 or 12 point size for the articles and larger sizes for headlines and titles.

Pages beyond the first page contained the same column layout and page numbers to retain the desired consistency.

We were fortunate to have access to an Apple LaserWriter printer for the final output. At a resolution of 300 dots per inch, the quality is excellent and looks like it is typeset, although typesetting resolution is actually much higher. If you must, you can print by the page on LaserWriters in some copy and computer stores for about one dollar per page.

Good luck with your paper - you're bound to have a lot of fun and gain much satisfaction from publishing it yourself on your Mac.

Printing Terms - What's Important

"Ten points, twelve points", "300 dots per inch" - what does it all mean to the quality of your publication? If you have been confused, here are some practical examples that will assist you in your quest for a professional looking newspaper.

The text you are reading has been printed on an Apple LaserWriter II printer and is twelve points high (a point is 1/72nd of an inch). The LaserWriter, like most popular laser printers, has a maximum resolution of 300 dots per inch (dpi). As a comparison, dot matrix printers normally print at less than 200 dpi. High quality (and very expensive) laser printers can currently output 600 and 1200 dpi; these printers can be rented in a few high tech printing shops if necessary. Here are some more examples:

This paragraph is printed in 10 point text. Although it permits more information on the page, it is not as easy to read. And readability is extremely important for your publication.

This 18 point headline will catch your reader's eye!

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My Year in a Computer Lab

continued from page 1

Software that I chose for a group occassionally proved totally unsuitable. Once I had my kindergarten class do a simple counting exercise and discovered they didn't recognize the numbers on the keyboard yet!

Many students also needed to learn new social skills and behaviors appropriate for a computer lab. Some were astounded that I had goals for them and expected them to stay on task.

If the computer lab was to succeed, it was clear that the students and I would have to make it happen together. I began by awarding permits, rewards, and other reinforcements to deserving students on a regular basis. My younger students earned "Learner's Permits". Middle grade students soon had "Driver's Licenses" permitting them to work independently while checking in at intervals. Those licenses proved their worth the day a 4th grade group calmly took over their own lab activities while I waited outside for paramedics to arrive to help a 2nd grader who had taken a bad fall.

Potential computer tutors were awarded "Operator's Permits". Surprisingly, some of the best tutors came from the group of 6th grade boys who were always in trouble. Two of these boys became super efficient lab assistants, helping me by turning off and covering the equipment each day.

Certificates were awarded when students finished their first programs in BASIC. Students also received little stickers for their personal record card by completing various learning programs, and consistantly completing their tasks. Students accumulating these stickers earned special "free choice" computer days to reward their efforts. Those tiny stickers were powerful rewards - and they should be, I thought, after I totalled the cost of providing a sticker each week for three hundred and sixty children!

Students and I shared our mutual fascination with our Apple computers and their connections to the learning process. We were truly partners. Five year olds now could recognize the space bar and the return key, and knew not to smudge the monitor. One little girl progressed from sucking her thumb between keystrokes to completing lab activities quickly and correctly.

Young computer users learned to count animals on the screen, and third graders were exposed to the power of word processing. Upper grade students entered the realm of economic, scientific, and historic computer simulations.

We discovered that cross-age tutoring benefitted everyone. So successful was this facet of the program that we created a permanent "Galaxy of Microstars" to honor exceptional helpers. Included on its rolls were two resource students with classroom behavior problems, a girl who had trouble completing classroom assignments, a G.A.T.E. student, a girl immersed in peer pressure outside the lab, and my "always in trouble" 6th grade boys.

Of equal importance, parents and teachers alike recognized the significance of our success. Teachers saw students making new connections across the curriculum. Parents related the flood of student successes with computer lab experiences.

At our end of year open house, I watched with pride as scores of children brought family members and friends to our computer lab where they eagerly demonstrated the successful connection between technology and learning. That evening they proved that our year-long partnership was an unqualified success.

Sue White is in the Ocean View School District.

Product Bulletin Board

HyperStudio (Apple IIGS®)

Roger Wagner Publishing

Some computing using educators, within the last couple of years, have begun to explore alternate uses for their Apple IIGS computers. They wanted to use their Apple IIGS for other than computer assisted instruction, LOGO programming, or word processing. The alternatives were few.

Now there is HyperStudio, (Roger Wagner Publishing, Inc.), for the Apple IIGS. The power of the IIGS (with 4000 available colors, a digital sound synthesizer, and 1 MB of RAM) can be utilized in a hypermedia environment merging text, digitized sound and pictures, motion images, and graphics in one environment. The program package includes the HyperStudio software, sound digitizing hardware, amplified speaker, microphone, sample applications & clip art. Additionally, Apple Computer's Apple II Video Overlay Card software, VideoMix, is included in the program. Those with the Apple Video Overlay Card can display applications, called stacks, incorporating video images on the same screen as HyperStudio.

Possible educational applications of this exciting and powerful program seem unlimited. New stacks addressing both broad and specific curriculum areas are being created constantly. In addition to utilizing existing stacks, users can easily create their own stacks that can include: video images from laserdisc players, digitized images from camcorders or Apple ImageWriter II printers, graphics (static or animated), and digitized sound (their own or pre-programmed). HyperStudio can be used in both keyboard and touch screen modes.

The dawn of hypermedia is upon us. For the first time, HyperStudio permits the application of multimedia interactive experiences for Apple IIGS users. Full motion or still frame video, digitized images, static and animated graphics, and digitized sound, integrated with text in one program will give the users of the program a truly interactive, multimedia, multimodal learning experience.

Video Overlay Card (Apple IIe®, IIGS)

Apple Computer, Inc.

There is a fun new product that allows you to connect your Apple IIe or Apple IIGS computer directly to your home VideoCassette Recorder (VCR) or laserdisc player. The Apple II Video Overlay Card allows you to create video overlays similar to the special effects used on TV.

All you need is your computer, the overlay card, and one or more of the various software programs available to draw, paint, and otherwise modify and overlay graphic images, text, and video. You may be inspired to jazz up that videotape of your trip to Alaska by adding captions, music, and animation. Instead of just another boring travelogue, you've created a video with distinct educational value.

Think of the possibilities, as they say. A unique family video album, a special production covering the big game or the school play, or an unusual family Christmas card that your friends and relatives play in their VCR.

Of course you can be the producer, director, and star of your own video. Or you might have more fun watching your students or family working together on the production while you supply the creative inspiration. We're in the age of computers and VCRs, and now you can easily tap the power of both machines to produce remarkable effects.

The Apple II Video Overlay Card is available from your Authorized Apple Dealer. Suggested list price is $395.00

If you have used a product that you feel could benefit educators in integrating technology into the classroom, please contact the editor.

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A Power Primer
for Computer Users

Electricity is one of the most common causes of damage to computers, particularily those equipped with hard disks. If you have a computer with a hard disk, or are thinking of purchasing one, here is a simple explanation of the effects of power fluctuations.

A hard disk consists of a series of rigid magnetically coated platters (hence "hard" disk) stacked one above the other, and driven by a small electric motor at 3,600 rpm. A floppy disk, in comparison, turns at 300 rpm. Mounted above each platter is a fragile recording head which can access any spot on the disk's magnetic recording surface. The entire mechanism is hermetically sealed in a metal enclosure to keep dust and moisture from reaching the heads and the surfaces of the platters.

The hard disk requires a constant voltage from the computer's power supply to keep the platters spinning at the correct rpm. If the voltage isn't adequate, the platters will screech to a halt and disaster will ensue! The recording heads will drop on the surface of the platters, destroying or garbling any information they happen to fall upon. This condition is called a "head crash" and could be compared to dropping a needle on the surface of a spinning record.

The power in southern California is normally good, averaging above 115 volts at the outlet. If, however, the voltage dips below 100 volts, even for a miniscule amount of time, your computer is likely to experience a head crash.

Voltage drops are often caused by electric motors or compressors turning on. When a motor starts, it draws a strong flow of electrical current, called amperage. This demand for amperage will lower the voltage on that circuit, sometimes to dangerous levels. The insidious part of the problem is that a neighbor in an adjoining building could be at fault. If the amperage demand is high enough, the voltage can drop across all circuits connected to the same power transformer.

One user reported strange problems with his computer, only to have it perform flawlessly when brought in for service. Upon investigation, it was found that his house wiring was inadequate, and every time the refrigerator compressor turned on, or his wife switched on the vacuum cleaner, the voltage would dip disasterously.

A business computer user discovered that the voltage to his entire building was being affected by an electric arc welder in an adjacent facility.

Conditions commonly called power surges are just the opposite of low voltage conditions, and they are not as frequent. Often a power surge follows a low voltage condition, but the real damage has already been done. Power surges result from lightning strikes and other dramatic electrical conditions that we have no control over.

Several solutions are available for both high and low voltage conditions, but the most important step to take is to make backups of your important data religiously. Then if you are the victim of a disasterous head crash, you'll be able to restore your data.

Always be conscious of the fact that your computer stores information magnetically and is very susceptable to power problems. Remember these points:

1. Keep at least two copies of your important computer-based information, just as you would on a paper based filing system.
2. You can assume that fluctuating power is a probable cause of recurring hard disk problems, unless proven otherwise.
3. Power fluctuations that cause interior lights to flicker are definitely serious enough to harm your computer.
4. Turn your computer off when not in use and unplug it during electrical storms. Fluctuating power cannot harm a computer that is shut down.